

Surgery in this region has always been a challenge for both disciplines owing to the presence of important anatomical structures such as the internal carotid artery, the otic capsule, and the facial nerve.

Several approaches have been developed to reach pathology located in the lateral skull base and in the fundus of the internal auditory canal (IAC) and petrous apex.

Despite the benign nature and limited dimensions of the lesions located in this anatomical region, extensive surgical approaches are often required to reach and remove the disease.

At present the main application of endoscopic surgery relies on the middle ear cholesteatoma surgical treatment, but in the natural evolution of the technique there are the steps forward of lateral skull base surgery and petrous bone pathology.

During the experience of recent years, we progressively noticed that the internal ear and the whole temporal bone could be accessed in an endoscopic assisted fashion or even by exclusive endoscopic approaches. Despite the benign nature and limited dimensions of lesions located in this anatomical region, extirpative surgical approaches are often required to reach and remove the disease. The problem would only be to codify as much as possible the landmarks and the procedures, and to integrate them to classic microscopic approaches.

Three main corridors to the lateral skull base were identified: the transcanal supragenulate corridor, the transcanal transpromontorial corridor, and the transcanal infracochlear corridor.

doi:10.1017/S0022215116004540

## Endoscopic Ear Surgery 2 (R844)

**ID: 844.2**

### Integrating endoscopy into everyday otology practice

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Endoscopes are not new for otologist but it took a long way to use them first for documentation and then in modern endoscopic ear surgery (EES).

We will discuss our experience with the use of endoscopes after five years adopting this approach and we will explain how the endoscopy has modified our management in some cases. The benefits and disadvantages will also be discussed.

We will show our learning curve in EES, our difficulties in adopting the use of endoscopes and our thoughts about how endoscopes can improve our everyday practice.

doi:10.1017/S0022215116004552

## Endoscopic Ear Surgery 2 (R844)

**ID: 844.3**

### Endoscopic Assisted ear surgery: Cholesteatoma and beyond

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#### Learning Objectives:

*Objective:* The purpose of this presentation is to emphasize the importance of incorporating the endoscope together with the microscope during cholesteatoma surgery. Because poor access to the hidden recesses of the middle ear was the major reason for residual disease, therefore, angled endoscopes were considered a major adjunct in dealing with such blind spots.

*Methods:* Endoscope-assisted surgery (EES) helped the surgeon to overcome the limitation of the straight vision offered by the microscope. On the other hand, EES has its own peculiarities as the surgeon works practically with one hand, and in many instances uses angled-vision endoscopes. New instrumentations specifically adapted for EES are now available. Also, new technologies have stimulated the creation of powered endoscopic equipment. Both have pushed the surgeon to widen the indications of EES beyond cholesteatoma.

*Results:* Our results confirmed that better control over the pathology, especially in hidden recesses, is possible with the help of endoscope. Advancements in EES improved maneuverability and offered better visualization over the pathology; therefore pushing the limits of endoscope and widening its indications.

The author highlights the importance of endoscope-assisted surgery during cholesteatoma surgery and presents different recent indications of endoscope in the field of otology and skull base surgery. EES is increasingly used for removal of various middle ear tumors, middle ear exploration for CHL, otosclerosis surgery and cochlear implant surgery. Also, CPA surgery during micro-vascular decompression and acoustic neuroma complete removal from the fundus of IAC.

*Conclusion:* Combining the attributes of endoscope together with the microscope is the most efficacious approach and will continue widening the indications of endoscope in the future. EES is technically feasible for the majority of surgeons and should be included in all training programs and courses.

doi:10.1017/S0022215116004564

## Endoscopic Ear Surgery 2 (R844)

**ID: 844.4**

### Pros and Cons of Otoendoscopy: 22 years Experience

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